

HAWK

LOADING AND BRACING ON FLAT BED TRAILER FOR TRAILER-ON-FLAT-CAR (TOFC) SHIPMENT OF COMPLETE ROUND IN M430 OR M611 CONTAINER

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THIS DRAWING, INCLUDING REVISION 1, SUPERSEDES DRAWING 19-48-5669-GM15A37 T. O. F. C., DATED 20 JULY 1962.

CAUTION: THE LOAD AS SHOWN MAY REQUIRE "CLEARANCE" CONSIDERATION BECAUSE OF EXCESSIVE LADING SIZE.

DO NOT SCALE

REVISIONS				DRAFTSMAN <i>GRS</i>	PROJ. ENG. <i>SA</i>	INSP. SP. <i>Ward</i>	INSP. SP. <i>Ward</i>
1	FEB 75	<i>Ward</i>	<i>Wesley E. Gilleland</i> <i>Adl Ehinger</i>	DESIGNED <i>SA</i>	FOR ISSUE OFFICE <i>Ward</i>	APPROVED <i>Wesley E. Gilleland</i> U. S. ARMY MISSILE COMMAND	
				APPROVED BY ORDER OF COMMANDING GENERAL U. S. ARMY MATERIEL COMMAND <i>Adl Ehinger</i> USAMC AMMO CENTER			
				U. S. ARMY MATERIEL COMMAND			
				FEBRUARY 1975			
		CLASS	DIVISION	DRAWING	FILE		
		19	48	5669	GM 15HA6		

GENERAL NOTES

- A. THIS DOCUMENT HAS BEEN PREPARED AND ISSUED IN ACCORDANCE WITH AR 740-1, AND AUGMENTS TM 743-200-1 (CHAPTER 5).
- B. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE APPLICABLE TO THE HAWK COMPLETE ROUND WHEN PACKED IN THE M430 OR M611 CONTAINER. SUBSEQUENT REFERENCE TO CONTAINER HEREIN MEANS CONTAINER WITH MISSILE COMPONENTS.
- C. FOR DETAIL OF THE M430 CONTAINER, SEE DRAWING NO. 9073970.
CONTAINER DIMENSIONS ----- 216" LONG X 28-3/4" WIDE X 41-1/2" HIGH.
GROSS WEIGHT ----- 3,225 POUNDS (APPROX).
- FOR DETAIL OF THE M611 CONTAINER, SEE DRAWING NO. 8035941.
CONTAINER DIMENSIONS ----- 216" LONG X 30" WIDE X 41-1/2" HIGH.
GROSS WEIGHT ----- 3,351 POUNDS (APPROX).
- D. THIS PROCEDURAL DRAWING IS APPLICABLE TO FLAT BED TRAILERS EQUIPPED WITH SPECIAL BULKHEAD BRACES AS SPECIFIED WITHIN THE BUREAU OF EXPLOSIVES PAMPHLET NO. 6C AND APPENDICES THERETO. ALSO, FOR TOFC SHIPMENTS, ONLY RAILCARS WHICH ARE SPECIFIED BY THE BUREAU OF EXPLOSIVES PAMPHLET NO. 6C, OR THE AFOREMENTIONED APPENDICES, WILL BE USED.
- E. THE OUTLOADING PROCEDURES SPECIFIED HEREIN ARE BASED ON 40'-0" LONG BY 8'-0" WIDE FLAT BED TRAILERS WITH WOOD OR WOOD AND METAL FLOORS AND HAVING A MINIMUM CLEARANCE OF 36'-6" BETWEEN INSTALLED BULKHEAD BRACES. TRAILERS WITH ALL METAL FLOORS CANNOT BE USED. CAUTION: LADING HEIGHT FOR THIS LOAD IS FURNISHED AS GUIDANCE TO BE USED BY CARRIERS IN ESTABLISHING SAFE ROUTING RELATIVE TO CLEARANCE LIMITS. SEE GENERAL NOTE "U" AT RIGHT.
- F. THIS ITEM IS A DOT CLASS "A" EXPLOSIVE. THESE PROCEDURES CAN ALSO BE UTILIZED FOR THE SHIPMENT OF THE CONTAINERS WHEN THEY ARE LOADED WITH AN ITEM WHICH IS IDENTIFIED DIFFERENTLY BY NOMENCLATURE THAN THE ITEM DESIGNATED WITHIN THE DRAWING TITLE, OR WHEN THEY ARE EMPTY. NOTE: 18" X 32" PLACARD BOARDS MUST BE PROVIDED FOR BOTH SIDES AND BOTH ENDS OF A LOAD AS REQUIRED BY LAW AND/OR REGULATION. CAUTION: PLACARD BOARDS AND BOARD MOUNTING BRACKETS MUST NOT BE NAILED TO THE LADING; THEY WILL BE NAILED TO THE CARRYING VEHICLE. LIKEWISE, IF LOAD COVERING TARPULINS ARE USED, THEY MUST NOT BE NAILED TO THE LADING.
- G. CAUTION: LOADING OF THE DEPICTED ITEM IS RESTRICTED TO NOT MORE THAN TWO (2) LAYERS IN HEIGHT, DUE TO THE OVERALL LOAD HEIGHT.
- H. SELECTION OF A VEHICLE USED TO TRANSPORT THE DESIGNATE ITEMS MUST COMPLY WITH AR 55-355, CHAPTER 213, FOR EXPLOSIVES AND OTHER DANGEROUS ARTICLES IN FULL.
- J. GROSS WEIGHT AND AXLE DISTRIBUTION OF WEIGHT FOR A LOAD WILL BE THE RESPONSIBILITY OF THE CARRIER. THE CARRIER WILL ADVISE THE SHIPPER OF THE APPLICABLE LOADING REQUIREMENTS AND THE SHIPPER WILL LOAD ACCORDINGLY.
- K. NOTICE: A SHIPMENT WILL BE POSITIONED ON A TRAILER CONSISTANT WITH THE WEIGHT LAWS OF THE STATES THROUGH WHICH THE TRAILER WILL BE TRANSPORTED BY HIGHWAY (MOTOR CARRIER). THE NUMBER OF UNITS MAY BE ADJUSTED TO FIT THE QUANTITY TO BE SHIPPED; HOWEVER, THE APPROVED METHODS CONTAINED HEREIN MUST BE FOLLOWED AS CLOSELY AS POSSIBLE FOR BLOCKING, BRACING, AND STAYING OF THE DESIGNATED ITEMS.
- L. LADING WILL NOT BE SECURED BY CHAINS AND/OR LOAD BINDERS IN LIEU OF SPECIFIED DUNNAGE.
- M. OTHER TYPES OF LADING ITEMS MAY BE LOADED ON A TRAILER WHICH IS PARTIALLY LOADED WITH THE DESIGNATED ITEM, PROVIDING THE TOTAL LOAD IS COMPATIBLE, EXISTING DIRECTIVES ARE NOT VIOLATED, AND THE OTHER LADING ITEMS ARE BLOCKED AND BRACED TO EQUAL THE BLOCKING AND BRACING CRITERIA SPECIFIED HEREIN.
- N. IF THE CAPACITY OF THE MATERIALS HANDLING EQUIPMENT PERMITS, IT IS RECOMMENDED THAT CONTAINERS BE UNITIZED PRIOR TO PLACEMENT ABOARD THE TRAILER. SEE THE "UNITIZATION AND HANDLING PROCEDURAL GUIDANCE" ON PAGE 3.
- O. CAUTION: REGARDLESS OF THE TYPE OF TRAILER INVOLVED, ONLY THOSE TRAILERS HAVING TIE-DOWN STRAP ANCHORING FACILITIES WHICH PROVIDE HOLDING STRENGTH EQUAL TO OR GREATER THAN THE STRENGTH OF THE HOLD-DOWN STRAPS, AND WHICH ALIGN NEAR THE INDICATED LOCATIONS FOR THE HOLD-DOWN STRAPS, SHOULD BE USED. IF TRAILER STRAP ANCHOR DEVICES ARE NOT PROPERLY POSITIONED TO RECEIVE TWO INCH (2") STRAPPING AS SHOWN, OR IF THE STRAP ANCHOR DEVICES ARE NOT EQUAL TO OR GREATER THAN THE STRENGTH OF THE TIE-DOWN STRAPS, THE STRAPS MAY BE APPLIED TO FORM A COMPLETE LOOP WHICH ENCOMPASSES BOTH THE LADING AND THE TRAILER FRAME AND/OR BED. CAUTION: AVOID TRAILER WHEELS, FIFTH WHEEL PLATE, CONTROLS AND OTHER APPURTENANCES. USE EDGE PROTECTORS ON ALL SHARP EDGES.

(CONTINUED AT RIGHT)

MATERIAL SPECIFICATIONS

- LUMBER -----: SEE TM 743-200-1, DUNNAGE LUMBER, FED SPEC MM-L-751
- NAILS -----: COMMON, CEMENT COATED OR CHEMICALLY ETCHED,
FED SPEC FF-N-105.
ALT: ANNULAR-RING TYPE NAIL OF THE SAME SIZE.
- STRAPPING, STEEL -----: TYPE I OR IV, FINISH A OR B, FOR 1-1/4" STRAPPING AND
FINISH A, B, OR C FOR 2" STRAPPING, FED SPEC QQ-S-781.
- STRAP SEAL, STAKE
POCKET PROTECTOR ----: COMMERCIAL GRADE.
- ANTI-CHAFING MATERIAL: NEUTRAL BARRIER MATERIAL MIL-B-121 (OR EQUAL).
- WIRE -----: ANNEALED, BLACK, FED SPEC QQ-W-461.

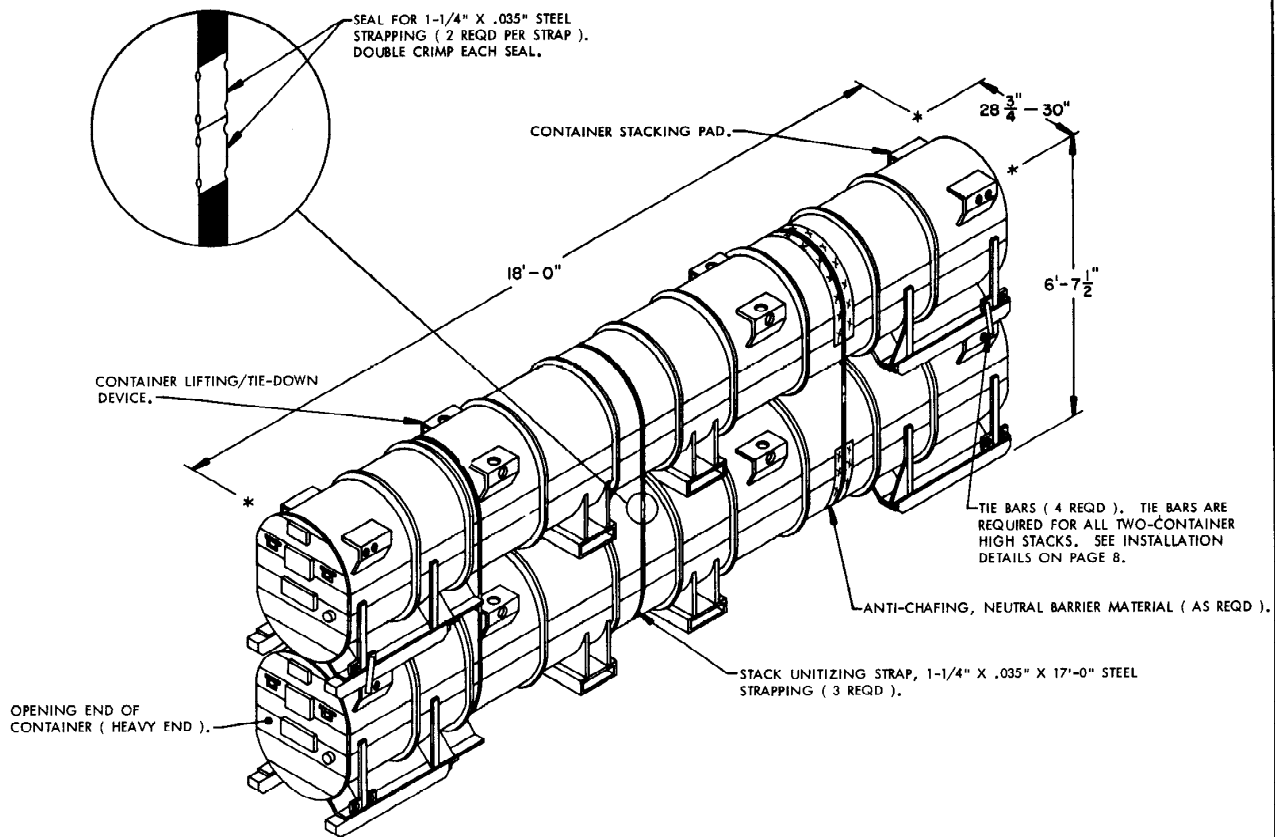
(GENERAL NOTES CONTINUED)

- P. WHEN ANY STRAP IS SEALED AT AN END-OVER-END LAP JOINT, A MINIMUM OF TWO (2) SEALS, BUTTED TOGETHER, WITH TWO (2) PAIR OF CRIMPS PER SEAL MUST BE USED TO SEAL THE JOINT. CAUTION: EXERCISE CARE DURING TENSIONING TO PREVENT DAMAGE TO THE CONTAINERS.
- Q. DUNNAGE LUMBER SPECIFIED THROUGHOUT THIS PROCEDURAL DRAWINGS IS OF NOMINAL SIZE. FOR EXAMPLE 2" X 4" MATERIAL IS ACTUALLY 1-5/8" THICK BY 3-5/8" WIDE OR 1-1/2" THICK BY 3-1/2" WIDE AND 2" X 6" MATERIAL IS ACTUALLY 1-5/8" THICK BY 5-5/8" WIDE OR 1-1/2" THICK BY 5-1/2" WIDE.
- R. NOTICE: A STAGGERED NAILING PATTERN WILL BE USED WHEN DUNNAGE IS NAILED TO THE FLOOR OF THE TRANSPORTING VEHICLE, OR WHEN LAMINATING DUNNAGE. THE NAILING PATTERN WILL BE ADJUSTED SO THAT A NAIL DOES NOT PENETRATE INTO OR NEAR A CRACK BETWEEN FLOOR BOARDS. ADDITIONALLY, THE NAILING PATTERN FOR AN UPPER PIECE OF LAMINATED DUNNAGE WILL BE ADJUSTED AS REQUIRED SO THAT A NAIL FOR THAT PIECE WILL NOT BE DRIVEN THROUGH ONTO OR RIGHT BESIDE A NAIL IN A LOWER PIECE.
- S. FOR ADDITIONAL GUIDANCE, ATTENTION IS DIRECTED TO THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3 AND TO THE SPECIAL NOTES SECTION WHICH IS IMMEDIATELY ADJACENT TO A DEPICTED OUTLOADING METHOD.
- T. THE LOAD IS SHOWN WITH ALL THE CONTAINERS FACING IN ONE DIRECTION; HOWEVER, TO FACILITATE THE REMOVAL OF THE HANDLING SLING, THE MIDDLE ROW OF CONTAINERS MAY BE TURNED TO FACE IN THE OPPOSITE DIRECTION.
- U. TRAILERS LONGER THAN 40'-0" CAN BE USED FOR THE LOAD SHOWN HEREIN, IF SUCH TRAILERS COMPLY WITH REQUIREMENTS OF GENERAL NOTE "D" AT THE LEFT. HOWEVER, IT SHOULD BE NOTED THAT TOFC CARS IN THE PRESENT DAY FLEET ARE DESIGNED TO HANDLE TWO (2) 40'-0" LONG TRAILERS AND THEREFORE SHIPMENT OF A LONGER TRAILER WOULD LIMIT THE USE OF A CAR TO A ONE-TRAILER LOAD SECURED TO THE "HITCH" ON THE "B-END" OF THE CAR.

REVISIONS

REVISION NO. 1, DATED FEBRUARY 1975, CONSISTS OF:

1. ADDING PROVISIONS FOR SHIPPING THE M611 CONTAINER.
2. ADDING "TIE BAR INSTALLATION" DETAILS ON PAGE 8.
3. ADDING "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3.
4. UPDATING THE GENERAL NOTES AND DRAWING FORMAT.
5. CHANGING DRAWING FILE NO. FROM GM 15A37 T.O.F.C. TO GM 15HA6.



TYPICAL STACK DETAIL
(THE M430 CONTAINER IS SHOWN)

**UNITIZATION AND HANDLING
PROCEDURAL GUIDANCE**

(UNITIZATION AND HANDLING PROCEDURAL GUIDANCE CONTINUED)

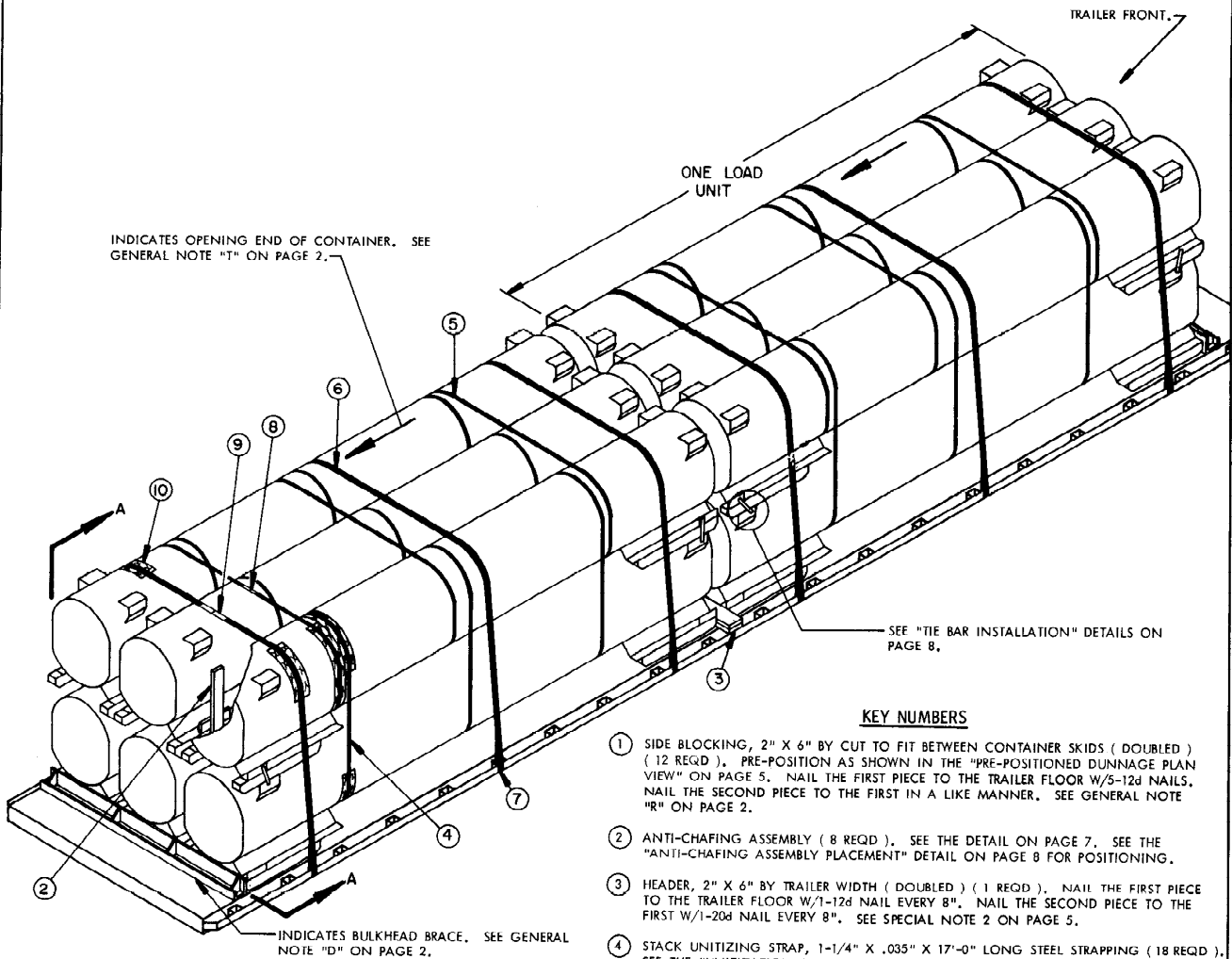
1. STACKING CONTAINERS FOR UNITIZING.
 - A. THE UPPER CONTAINER SHOULD BE PLACED AS CLOSELY AS POSSIBLE IN VERTICAL ALIGNMENT WITH THE LOWER CONTAINER.
 - B. POSITION THE OPENING END OF THE UPPER CONTAINER ABOVE THE OPENING END OF THE LOWER CONTAINER.
 - C. THE SKIDS OF THE UPPER CONTAINER SHOULD BE FULLY SEATED UPON THE STACKING PADS OF THE LOWER CONTAINER.
2. APPLICATION OF CONTAINERS TIE BARS.
 - A. TIE BARS ARE LOCATED ON THE SIDE OF THE CONTAINER.
 - B. INSTALL FOUR TIE BARS, TWO ON EACH SIDE, OF A TWO-CONTAINER HIGH STACK.
3. INSTALLATION OF 1-1/4" X .035" UNITIZING STEEL STRAPPING.
 - A. EACH OF THE THREE UNITIZING STRAPS SHOULD BE POSITIONED AROUND THE CONTAINERS AS SHOWN. PLACE STRAPPING SO THAT IT LAYS FLAT AND STRAIGHT WITH THE CONTOUR OF THE CONTAINERS; I.E., VERTICAL ALONG THE SIDES AND STRAIGHT ACROSS THE TOP AND BOTTOM OF THE STACK.
 - B. PLACE ANTI-CHAFING NEUTRAL BARRIER MATERIAL UNDER THE STRAPPING AT ALL POINTS OF CONTACT WITH CONTAINERS AND SECURE TO PREVENT DISLODGE-
MENT DURING AND AFTER STRAP APPLICATION. STRIPS OF ANTI-CHAFING MATERIAL MAY BE TAPED OR STRING-TIED TO THE CONTAINER OR STRAPPING, OR IT CAN BE FORMED INTO STRAP ENCIRCLING TUBES BY WINDING THE MATERIAL AROUND THE STRAPPING TO FORM A SELF-HOLDING UNIT.
 - C. STRAPPING WILL BE FIRMLY TENSIONED, AND EACH END-OVER-END LAP JOINT WILL BE SEALED WITH TWO DOUBLE CRIMPED STRAP SEALS AS SHOWN, SEE GENERAL NOTE "P" ON PAGE 2. THE LAP JOINTS WILL BE MADE ALONG THE SIDES OF THE STACK SO THAT THE SEALS WILL NOT BE IN CONTACT WITH THE CONTAINERS. DURING STRAP TENSIONING, CARE SHOULD BE EXERCISED TO ENSURE THAT THE CONTAINERS ARE NOT DAMAGED. EXCESS STRAPPING (STRAP ENDS) SHOULD BE CUT OR BROKEN OFF NEAR THE JOINT SEALS.
4. CONTAINER OR CONTAINER-STACK HANDLING.

NOTES: (1) APPROVED MATERIALS HANDLING EQUIPMENT (MHE) IS SPECIFIED IN OTHER DOCUMENTS. MHE IS INTENDED TO MEAN EQUIPMENT SUCH AS FORKLIFT TRUCKS, CRANES, HAND TRUCKS, DOLLIES, ROLLER ASSEMBLIES, SLINGS AND SPREADER BARS.

(2) PRECAUTIONARY HANDLING TECHNIQUES NORMALLY EMPLOYED OR AS SPECIFIED FOR THE TYPE OF COMMODITY INVOLVED WILL BE OBSERVED.

 - A. ONLY APPROVED AND APPROPRIATELY SIZED MATERIALS HANDLING EQUIPMENT WILL BE USED FOR HANDLING THE DEPICTED CONTAINERS.
 - B. IF HANDLING IS ACCOMPLISHED WITH A FORKLIFT TRUCK, THE CONTAINERS SHOULD BE HANDLED FROM A SIDE POSITION AS MUCH AS POSSIBLE. CARE MUST BE EXERCISED WHEN INSERTING FORKS UNDER A CONTAINER, TO PREVENT DAMAGE TO THE CONTAINER BY THE FORK TINES OR THE FORKLIFT PACKAGE GUARD. FOR VERY SHORT "INCHING" SPEED MOVEMENTS, SUCH AS WILL BE EXPERIENCED DURING TRAILER LOADING, A TWO-HIGH CONTAINER STACK MAY BE HANDLED BY INSERTING THE FORKS OF A FORKLIFT TRUCK INTO THE FORK RECEPTACLES OF THE UPPER CONTAINER.
 - C. IF A ONE OR TWO HIGH CONTAINER STACK IS HANDLED BY SLINGING, THE SLING MAY BE ATTACHED TO THE LIFTING DEVICES ON THE CONTAINER.

(CONTINUED AT RIGHT)



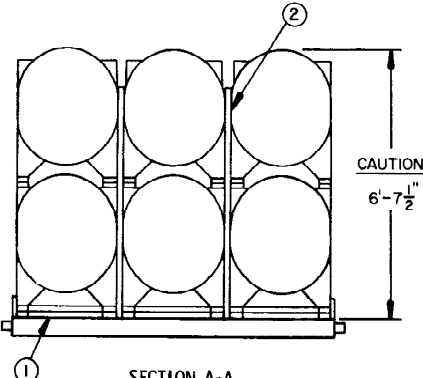
ISOMETRIC VIEW

INDICATES BULKHEAD BRACE. SEE GENERAL NOTE "D" ON PAGE 2.

SEE "TIE BAR INSTALLATION" DETAILS ON PAGE 8.

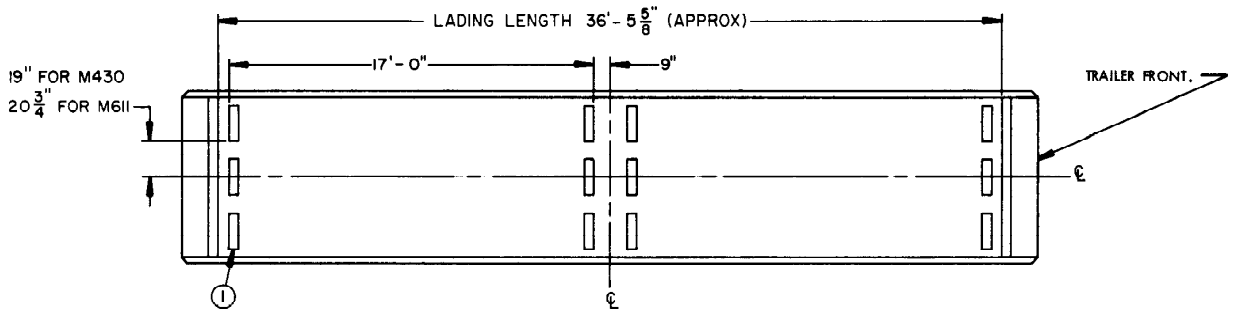
KEY NUMBERS

- ① SIDE BLOCKING, 2" X 6" BY CUT TO FIT BETWEEN CONTAINER SKIDS (DOUBLED) (12 REQD). PRE-POSITION AS SHOWN IN THE "PRE-POSITIONED DUNNAGE PLAN VIEW" ON PAGE 5. NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/5-12d NAILS. NAIL THE SECOND PIECE TO THE FIRST IN A LIKE MANNER. SEE GENERAL NOTE "R" ON PAGE 2.
- ② ANTI-CHAFING ASSEMBLY (8 REQD). SEE THE DETAIL ON PAGE 7. SEE THE "ANTI-CHAFING ASSEMBLY PLACEMENT" DETAIL ON PAGE 8 FOR POSITIONING.
- ③ HEADER, 2" X 6" BY TRAILER WIDTH (DOUBLED) (1 REQD). NAIL THE FIRST PIECE TO THE TRAILER FLOOR W/1-12d NAIL EVERY 8". NAIL THE SECOND PIECE TO THE FIRST W/1-20d NAIL EVERY 8". SEE SPECIAL NOTE 2 ON PAGE 5.
- ④ STACK UNITIZING STRAP, 1-1/4" X .035" X 17'-0" LONG STEEL STRAPPING (18 REQD). SEE THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3.
- ⑤ BUNDLING STRAP, 1-1/4" X .035" X 25'-0" LONG STEEL STRAPPING (6 REQD). INSTALL TO ENCIRCLE THE LATERALLY ADJACENT CONTAINERS IN THE TOP LAYER, AS SHOWN. SEE SPECIAL NOTE 4 ON PAGE 5.
- ⑥ HOLD-DOWN STRAP, 2" X .050" X 30'-0" LONG STEEL STRAPPING (6 REQD). INSTALL EACH STRAP FROM TWO (2) 15'-0" LONG PIECES. SEE GENERAL NOTE "P" ON PAGE 2.
- ⑦ PAD, 2" X .050" X 18" LONG STEEL STRAPPING (12 REQD). POSITION UNDER AN ANCHORING FACILITY AND SEAL TO A HOLD-DOWN STRAP MARKED ⑥. SEE "DETAIL A" ON PAGE 7. ALT.: STAKE POCKET PROTECTOR (24 REQD). USE TWO (2) UNDER EACH ANCHORING FACILITY WITH A HOLD-DOWN STRAP. SEE "DETAIL B" ON PAGE 7.
- ⑧ SEAL FOR 1-1/4" STEEL STRAPPING (48 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "P" ON PAGE 2.
- ⑨ SEAL FOR 2" STEEL STRAPPING (48 REQD, 8 PER STRAP). DOUBLE CRIMP EACH SEAL, EXCEPT THOSE USED TO SECURE THE PADS, PIECES MARKED ⑦. SEE GENERAL NOTE "P" ON PAGE 2.
- ⑩ ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). POSITION UNDER ALL STRAPS AT POINTS OF CONTACT WITH CONTAINER.



SECTION A-A

STRAPPING OMITTED FOR CLARITY.



PRE-POSITIONED DUNNAGE PLAN VIEW

SPECIAL NOTES:

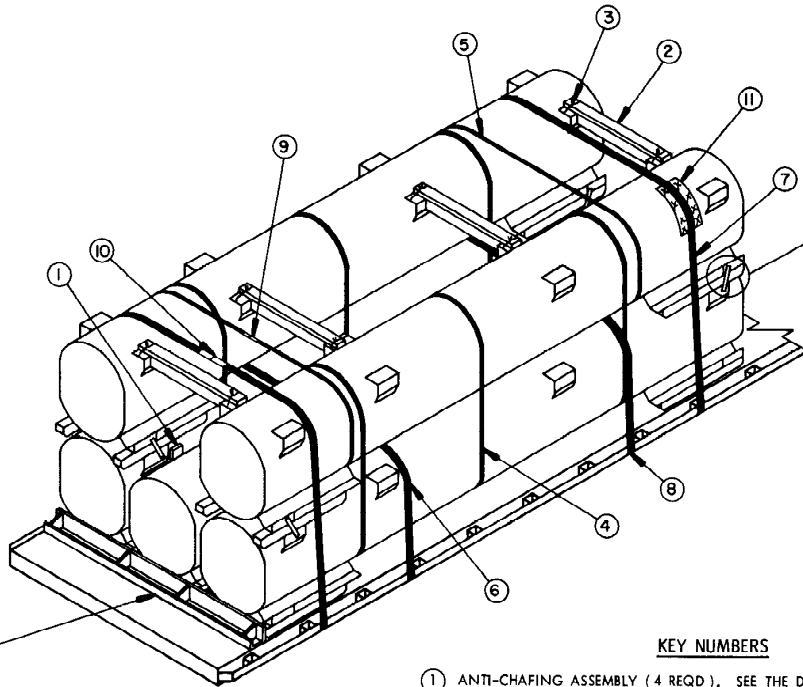
1. A 12-UNIT LOAD IS SHOWN ON A 40'-0" LONG BY 8'-0" WIDE FLAT BED TRAILER HAVING 36'-5-5/8" MINIMUM CLEARANCE BETWEEN THE INSTALLED BULKHEAD BRACES.
2. IF THE CLEARANCE BETWEEN BULKHEAD BRACES EXCEEDS 36'-5-5/8", THE REMAINING VOID MUST BE LOCATED BETWEEN THE CONTAINER LOAD UNITS. IF THE VOID SPACE BETWEEN THE LOAD UNITS IS 24" OR MORE, "INTERMEDIATE BLOCKING" MUST BE PROVIDED AS SPECIFIED IN THE "TYPICAL INTERMEDIATE BLOCKING" DETAIL ON PAGE 7. HOWEVER, IF THE VOID SPACE BETWEEN THE LOAD UNITS IS LESS THAN 24", ADDITIONAL HEADERS OF SUFFICIENT QUANTITY AND WIDTHS TO FILL THE VOID WILL BE USED, AND NAILED AS SPECIFIED FOR PIECE MARKED ③. AT LEAST ONE (1) HEADER MUST BE USED BETWEEN LOAD UNITS.
3. THE DEPICTED LOAD CONFIGURATION MAY BE ADJUSTED TO SATISFY THE QUANTITY OF ITEMS TO BE SHIPPED. A REDUCED LOAD MAY BE SHIPPED BY APPLYING THE "PROCEDURES FOR OMITTED CONTAINER" SPECIFIED ON PAGE 6.
4. **CAUTION:** LOAD BUNDLING STRAPS, PIECE MARKED ⑤, MUST BE INSTALLED WITH CARE SO AS NOT TO HAVE AN EDGE-TO-EDGE CONTACT WITH THE STACK UNITIZING STRAPS, PIECES MARKED ④.

BILL OF MATERIAL

LUMBER	LINEAR FEET	BOARD FEET
2" X 4"	52	35
2" X 6"	56	56
NAILS	NO. REQD	POUNDS
10d (3")	24	1/2
12d (3-1/4")	132	2
20d (4")	12	1/2
STEEL STRAPPING, 1-1/4" X .035" ---	456' REQD	65 LBS
STEEL STRAPPING, 2" X .050" -----	198' REQD	66 LBS
SEAL FOR 1-1/4" STRAPPING -----	48 REQD	3 LBS
SEAL FOR 2" STRAPPING -----	48 REQD	10 LBS
ANTI-CHAFING MATERIAL -----	AS REQD	NIL

LOAD AS SHOWN

ITEM	QUANTITY	WEIGHT (APPROX)
M430 CONTAINER	12	38,700 LBS
DUNNAGE		374 LBS
TOTAL WEIGHT		39,074 LBS
ITEM	QUANTITY	WEIGHT (APPROX)
M611 CONTAINER	12	40,212 LBS
DUNNAGE		374 LBS
TOTAL WEIGHT		40,586 LBS



ISOMETRIC VIEW

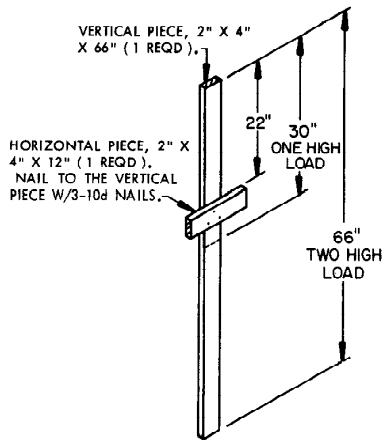
SPECIAL NOTES:

1. A 5-CONTAINER LOAD UNIT IS SHOWN ON AN 8'-0" WIDE TRAILER. THIS LOAD UNIT MAY BE SUBSTITUTED FOR A 6-CONTAINER LOAD UNIT, TO PROVIDE FOR THE SHIPMENT OF LESS THAN A FULL LOAD. HEADERS AND SIDE BLOCKING WILL BE INSTALLED AS SPECIFIED IN THE LOAD AS SHOWN ON PAGES 4 AND 5.
2. **CAUTION:** LOAD BUNDLING STRAPS, PIECE MARKED (5), MUST BE INSTALLED WITH CARE SO AS NOT TO HAVE AN EDGE-TO-EDGE CONTACT WITH THE STACK UNITIZING STRAPS, PIECES MARKED (4).
3. EACH STRAP, KEY NUMBER (6), WILL BE ANCHORED TO A TIE-DOWN FACILITY ON ONE SIDE OF THE TRAILER, RUN OVER THE TOP OF THE CONTAINERS IN THE BOTTOM LAYER, PASSED THROUGH A TIE-DOWN FACILITY ON THE OPPOSITE SIDE OF THE TRAILER, AND BROUGHT BACK UP ABOVE THE TRAILER FLOOR WHERE IT CAN BE TENSIONED AND SEALED.

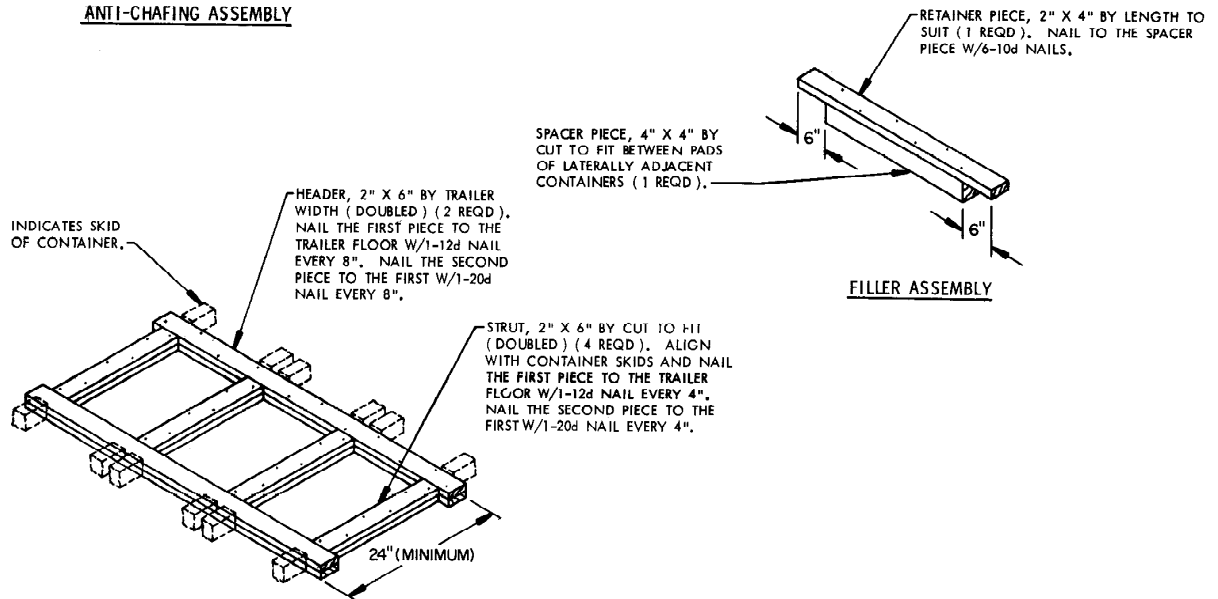
SEE "TIE BAR INSTALLATION" DETAILS ON PAGE 8.

KEY NUMBERS

- (1) ANTI-CHAFING ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 7. SEE THE "ANTI-CHAFING ASSEMBLY PLACEMENT" DETAIL ON PAGE 8 FOR POSITIONING. ALSO, SEE SPECIAL NOTE 1 AT LEFT.
- (2) FILLER ASSEMBLY (4 REQD). SEE THE DETAIL ON PAGE 7.
- (3) TIE WIRE, NO. 14 GAGE WIRE 24" LONG (8 REQD). INSTALL TO FORM A COMPLETE LOOP AROUND FILLER ASSEMBLY AND CONTAINER PAD, BRING ENDS TOGETHER AND TWIST TAUT. SECURE THE WIRE TO THE FILLER ASSEMBLY WITH A PARTIALLY DRIVEN 10d NAIL BENT OVER THE WIRE, OR WITH A STRAP STAPLE.
- (4) STACK UNITIZING STRAP, 1-1/4" X .035" X 17'-0" LONG STEEL STRAPPING (6 REQD). SEE THE "UNITIZATION AND HANDLING PROCEDURES" ON PAGE 3.
- (5) BUNDLING STRAP, 1-1/4" X .035" X 25'-0" LONG STEEL STRAPPING (2 REQD). INSTALL TO ENIRCLE THE CONTAINERS IN THE TOP LAYER, AS SHOWN. SEE SPECIAL NOTE 2 AT LEFT.
- (6) HOLD-DOWN STRAP, 2" X .050" X 22'-0" LONG STEEL STRAPPING (2 REQD). INSTALL FROM ONE PIECE OF STRAPPING. SEE SPECIAL NOTE 3 AT LEFT.
- (7) HOLD-DOWN STRAP, 2" X .050" X 30'-0" LONG STEEL STRAPPING (2 REQD). INSTALL EACH STRAP FROM TWO (2) 15'-0" LONG PIECES. SEE GENERAL NOTE "P" ON PAGE 2.
- (8) PAD, 2" X .050" X 18" LONG STEEL STRAPPING (8 REQD). POSITION UNDER ANCHORING FACILITY AND SEAL TO HOLD-DOWN STRAP MARKED (6) AND/OR (7). SEE "DETAIL A" ON PAGE 7. ALT: STAKE POCKET PROTECTOR (16 REQD). USE TWO (2) UNDER EACH ANCHORING FACILITY WITH A HOLD-DOWN STRAP. SEE "DETAIL B" ON PAGE 7.
- (9) SEAL FOR 1-1/4" STEEL STRAPPING (16 REQD, 2 PER STRAP). DOUBLE CRIMP EACH SEAL. SEE GENERAL NOTE "P" ON PAGE 2.
- (10) SEAL FOR 2" STEEL STRAPPING (28 REQD, 6 PER HOLD-DOWN STRAP MARKED (6), AND 8 PER HOLD-DOWN STRAP MARKED (7)). SEE "DETAIL A" AND "DETAIL B" ON PAGE 7. SEE GENERAL NOTE "P" ON PAGE 2.
- (11) ANTI-CHAFING NEUTRAL BARRIER MATERIAL (AS REQD). POSITION UNDER ALL STRAPS AT POINTS OF CONTACT WITH THE CONTAINER.

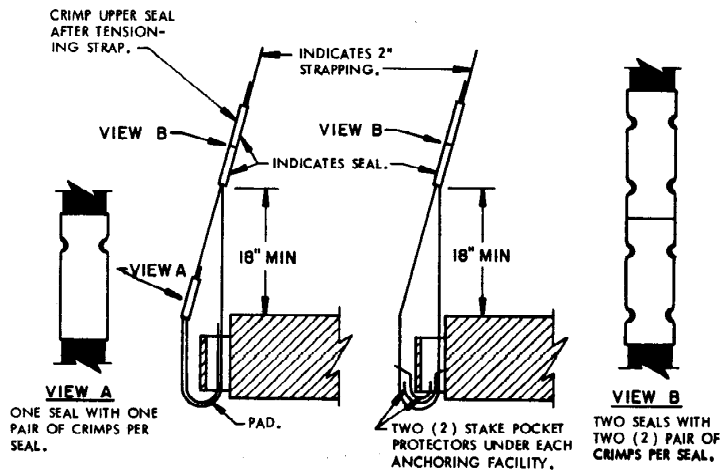


ANTI-CHAFING ASSEMBLY



TYPICAL INTERMEDIATE BLOCKING

TO BE USED BETWEEN LOAD UNITS TO BLOCK OUT EXCESS VOID. SEE SPECIAL NOTE 2 ON PAGE 5.



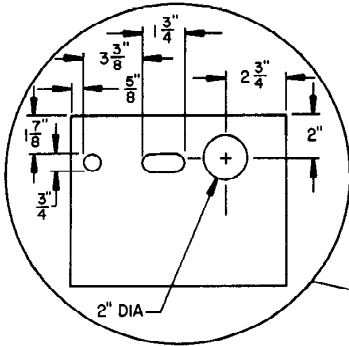
DETAIL A

METHOD OF INSTALLING 2" STRAPPING AND PAD AT ANCHORING FACILITY.

DETAIL B

METHOD OF INSTALLING 2" STRAPPING AND STAKE POCKET PROTECTORS (ALT PAD).

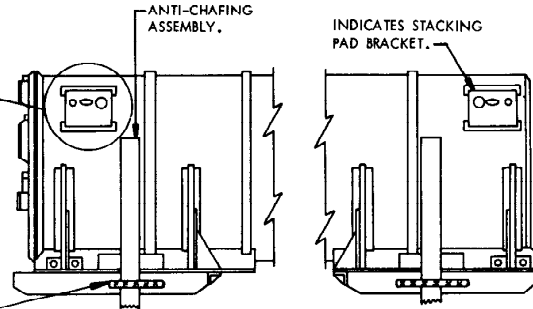
DETAILS



DETAIL C

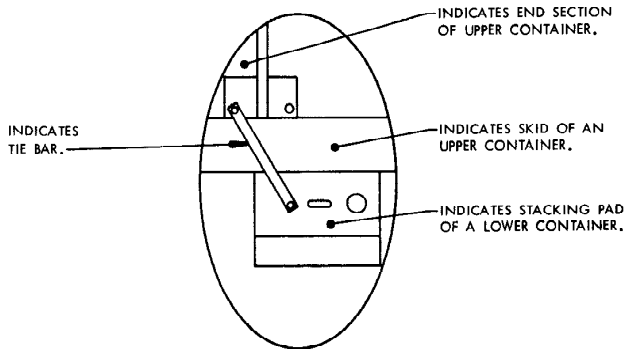
BRACKET AT OTHER END OF CONTAINER IS OPPOSITE HAND.

TO PREVENT DISPLACEMENT DURING LOADING OPERATIONS, THE ANTI-CHAFING ASSEMBLY MAY BE TAPED TO AN UPPER CONTAINER SKID AS SHOWN.

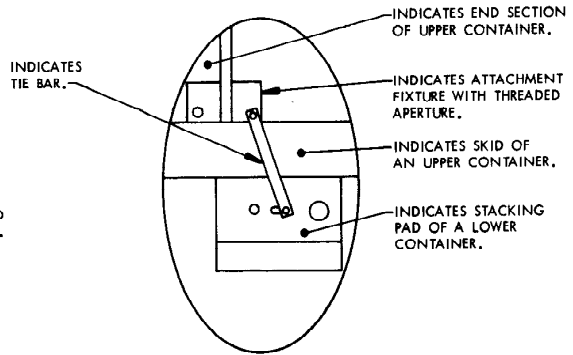


ANTI-CHAFING ASSEMBLY PLACEMENT

THE ANTI-CHAFING ASSEMBLY WILL BE PLACED AS SHOWN WHEN LOADING THE M430 CONTAINER. WHEN LOADING THE M611 CONTAINER, WHICH HAS WIDER SKIDS, REMOVE THE HORIZONTAL PIECE ON THE ANTI-CHAFING ASSEMBLY AND LAMINATE A 1" X 4" BY LENGTH TO SUIT $W/64$ NAILS TO THE VERTICAL PIECE OF THE ANTI-CHAFING ASSEMBLY. MOVE THE ANTI-CHAFING ASSEMBLY INBOARD ON THE M611 CONTAINER SO AS TO BE CAPTURED BEHIND THE INBOARD END OF THE SKID. THE ANTI-CHAFING ASSEMBLY MAY BE TAPED TO THE CONTAINER TO PREVENT DISPLACEMENT DURING LOADING OPERATIONS.



ALTERNATE METHOD



PREFERRED METHOD

TIE BAR INSTALLATION

NOTE: AT THE OTHER END OF A STACK, THE TIE BAR WILL ANGLE UPWARD IN A DIRECTION OPPOSITE TO THAT SHOWN ABOVE AND TOWARD THE ADJACENT END SECTION OF THE UPPER CONTAINER.